

WHAT IS CLAIMED IS:

1. A hammer-type stapler with cartridge for driving staples into target piece comprising
 - a casing having a front portion and a handle connected with a distal end of
 - 5 said front portion;
 - a replaceable cartridge installed in said front portion;
 - a pushing device slidably mounted in said handle;
 - a hollow hammer casing extended from an opposing end of said front portion, said hammer casing including a front wall, a back wall, a pair of
 - 10 opposite side walls and an upper opening, said upper opening;
 - a driving unit embedded on said side walls of said hammer casing;
 - said front portion including a top wall, a pair of opposite side walls and a lower opening, said lower opening extended to said front wall of said hammer casing, said top wall of said front portion connected with said back wall of said
 - 15 hammer casing, said side walls of said front portion connected with said side walls of said hammer casing and respectively formed a cartridge-taking opening thereon adjacent to said lower opening;
 - a cartridge matching unit installed on an internal surface of said front wall of said hammer casing for guiding said driving unit moved smoothly up and
 - 20 down; and
 - a bracket with two ends respectively affixed on said side walls of said hammer casing adjacent to said cartridge matching unit for holding the cartridge; wherein
 - said handle including a top wall, a lower wall and a pair of opposite side

walls with a distal opening formed on an end thereof, said top wall formed a locking hole thereon adjacent to said distal opening, a lock pin installed in said pushing device and plugged in said locking hole; and

5 said cartridge composed of two identical, upper and lower, opposite staple containers, said staple containers respectively protruded a pair of parallel tracks from each opposite top surface therein, a staple pusher and said staples slidably installed on said tracks and pushed by the pushing device, two staple-outlets respectively formed on said staple containers , and two steel pads respectively mounted on said staple-outlets for protecting said cartridge against cutting and
10 abrasion from the driving element.

2. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein a shock-shearing groove is formed in the a connected portion of said top wall of said front portion and said back wall of said hammer casing.

15 3. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein a coat of soft material is covered on said handle for a comfortable hold and for absorbing vibration.

4. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein said driving unit includes:

20 an U-shaped seat with a concave space therein including a top wall and two opposing side walls, a weight-guiding device mounted in said concave space and connected to said top wall, a weight slidably mounted on said weight-guiding device, a cushion installed between said weight-guiding device and said U-shaped seat for reducing an impacted force from said weight

bounced, a bottom plate connected to a distal end of said weight-guiding device, an elastic element installed between said weight and said bottom plate and mounted on said weight-guiding device for providing a recoiling force to said weight, and a driving element affixed on said weight, and an engaging means
5 formed respectively on said side walls of said U-shaped seat and said side walls of said hammer casing; whereby said driving unit can be engaged on the hammer casing and said driving element adjacent to said front wall of said hammer casing for driving said staples into target piece.

5. A hammer-type stapler with cartridge for driving staples into target piece
10 as claimed in claim 1, wherein said pushing device includes:

a pushing-device casing, a spring pushing unit affixed in said pushing-device casing, and a cartridge holder slidably mounted on said spring pushing unit;

said pushing-device casing having a sidelong opening formed on a distal
15 end thereof defining an upper board and a lower board, said upper board having an upper pressing apparatus at a distal end, said lower board having a lower pressing apparatus at a distal end, an elastic element installed between said upper board and said lower board, a spring chamber formed at another end opposite said sidelong opening for containing said spring pushing unit, an
20 empty groove formed above said spring chamber for reducing total weight, a horizontal groove formed on a lateral surface thereof with an terminal end, not cross said lateral surface, and a pin plugged into a lateral surface of said handle corresponding to said horizontal groove; whereby said pushing device will not apart said casing when drawn away;

said cartridge holder having a holding flange horizontally extended thereon for matching two ends of said cartridge and holding said cartridge in said casing, a penetrating hole formed therein to let said spring pushing unit passed through, and a sliding groove crosscutting therein and vertical to said
5 penetrating hole with a pin penetrated therein; whereby the cartridge holder can slide within the side walls behind the cartridge-taking opening;

said spring pushing unit including a spring, a front rod, and a rear rod slipped on said front rod and formed an adjustable guiding rod, said guiding rod pushing said staple pusher with an end thereof and the other end affixed in
10 a bottom of said spring chamber.

6. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein

said staple containers of said cartridge respectively outstand a section toward said staple-outlet, said staple pusher of said cartridge further including a
15 staple-like shell and a block protruded from an internal surface of said staple-like shell, a sealer formed on an end of said staple container for preventing said staple pusher slipped off, and the other end of said staple container forming a staple-outlet; wherein the length of said block match up said steel pad result in said staple pusher will not project said staple-outlet to
20 avoid striking from said driving element.

7. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein said cartridge matching unit is a guiding plate embedded in an internal surface of said front wall of the hammer casing with two vertical guiding tracks formed thereon for guiding said driving element

smoothly moved up and down.

8. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 1, wherein a finished polymer of said casing having microscopic gas bubbles throughout therein; whereby reducing the weight of said casing and lessening the tiredness of hand during operating.

9. A cartridge for various wide staples used in said hammer-type stapler with cartridge could load various size staples comprising:

a pair of two identical, upper and lower staple containers, formed opposite to each other, and a staple pusher mounted therein; said staple containers including a pair of parallel tracks protruded from each opposite top surface therein defining an E-shaped groove, and a staple pusher slidably mounted on said tracks for pushing staples loaded thereon, said staple pusher having a staple-like shell and a block;

said staple container having a sealer formed on an end thereof for preventing said staple pusher slipped off, two staple-outlets respectively formed on two ends thereof, two steel pad respectively mounted on said staple-outlets, said block match with steel pad result in said staple pusher not projected out said staple-outlet, and two metal coverings respectively pivoted on two end thereof;

said metal covering including two lateral surfaces respectively bended from said side distal portion of the metal covering thereof, a front hood formed between said two lateral surfaces adjacent to said staple-outlet, and an upper opening formed above the front hood, said front hood could having two protruding ears respectively formed on two ends of said lateral surfaces ;

whereby

exactly guided said driving element to drive staples, and prevented staples slipped off said staple-outlet, so that by setting a width of said lateral surfaces adapted to different staples, said cartridge for various wide staple could
5 accommodate to staples of different width.

10. A cartridge for various wide staples used in said hammer-type stapler with cartridge as claimed in claim 9, wherein said hammer-type stapler with cartridge has a cartridge matching unit as a concave groove formed on said front wall of said hammer casing with a thickness thereof about equaled to said
10 metal covering for matching two ends of said cartridge for various wide staples; whereby

could laterally fix said cartridge for various wide staples and let driving unit smoothly move in said metal covering.

11. A cartridge for various wide staples used in said hammer-type stapler
15 with cartridge as claimed in claim 9, wherein said hammer-type stapler with cartridge has a cartridge holder including a holding flange horizontally protruded from a bottom thereof, a penetrating hole formed therein to, and a sliding groove crosscutting therein and vertical to said penetrating hole; wherein

20 said holding flange could be a thin slice of metal affixed on a bottom of said cartridge holder for holding said cartridge.

12. A hammer-type stapler with cartridge for driving staples into target piece comprising:

a casing having a front portion and a handle connected with a distal end of

said front portion;

a hollow hammer casing extended from an opposing end of said front portion;

a driving unit vertically mounted in said hammer casing for driving said
5 staple with a vertical action;

a replaceable cartridge installed in said front portion;

a pushing device slidably mounted in said handle for pushing said staples
in said cartridge to a driven position under said driving unit; and

a metal hammering plate mounted on a top of the hammer casing whereby
10 said hammer-type stapler with a function of being a hammer.

13. A hammer-type stapler with cartridge for driving staples into target
piece as claimed in claim 12, wherein a shock-shearing groove is formed in the
a connected portion of said top wall of said front portion and said back wall of
said hammer casing.

15 14. A hammer-type stapler with cartridge for driving staples into target
piece as claimed in claim 12, wherein a coat of soft material is covered on said
handle for holding comfortably and absorbing vibration.

15. A hammer-type stapler with cartridge for driving staples into target
piece as claimed in claim 12, wherein said driving unit includes:

20 a weight-containing seat affixed in said hammer casing with at least a
weight-guiding device mounted therein, a weight slidably mounted on said
weight-guiding device, a bottom plate affixed to a distal end of said
weight-guiding device, at least an elastic element installed between said weight
and said bottom plate for providing a recoiling force to said weight, and a

driving element affixed on said weight, and a driving element affixed on said weight for driving staples into target piece.

16. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 15, wherein said weight-guiding device could be a weight-guiding rod, or a metal plate, or a metal shell.

17. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 15, wherein said driving unit includes a cushion installed between said weight-guiding device and said weight-containing seat for reducing an impacted force from said weight bounced.

18. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 12, wherein pushing device includes

a pushing-device casing, a spring pushing unit affixed in said pushing-device casing, and a cartridge holder slidably mounted on said spring pushing unit;

said pushing-device casing having a securing unit mounted on an end thereof for locking up therein, said securing unit having at least one elastic element for providing force while unlocking, a spring chamber formed at another end thereof for containing said spring pushing unit, a horizontal groove formed on a lateral surface thereof with an terminal end, not cross said lateral surface, and a pin plugged into a lateral surface of said handle corresponding to said horizontal groove; whereby said pushing device will not apart said casing when drawn away;

said cartridge holder having a penetrating hole formed therein, and a sliding groove crosscutting therein vertical to said penetrating hole and

matching with a pin penetrated on said casing, and a thin metal plate connected on a bottom thereof and horizontally protruding a proper length;

said spring pushing unit including a spring, a front rod, and a rear rod slipped on said front rod and formed an adjustable guiding rod; wherein an end
5 of said front rod pushing said staple pusher, and an end of said rear rod affixed in a bottom of said spring chamber.

19. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 18, wherein said securing unit of said pushing-device casing including a sidelong opening formed on a distal end thereof defining an
10 upper board and a lower board, a lock pin slidably mounted in said upper board, an elastic element mounted between said lock pin and said lower board, an upper pressing apparatus connected on a distal end of said upper board, a lower pressing apparatus connected on a distal end of said lower board, an elastic element mounted between said upper board and said lower board, a spring
15 chamber formed at another end opposite said sidelong opening for containing said spring pushing unit, an empty groove formed above said spring chamber for reducing total weight, a horizontal groove formed on a lateral surface thereof with an terminal end, not cross said lateral surface, and a pin plugged into a lateral surface of said handle corresponding to said horizontal groove;
20 whereby said pushing device will not apart said casing when drawn away.

20. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 12, wherein said hammer casing having a cartridge matching unit formed thereon for matching two ends of said cartridge; whereby said driving unit could smoothly and vertically drive staples; and

a bracket affixed on a lower portion of said hammer casing adjacent to said cartridge matching unit for holding the cartridge.

21. A hammer-type stapler with cartridge for driving staples into target piece as claimed in claim 12, wherein a finished polymer of said casing having
5 microscopic gas bubbles throughout therein; whereby
reducing the weight of said casing and lessening the tiredness of hand during operating.